STAT 436 - Group #8

Airline Delays

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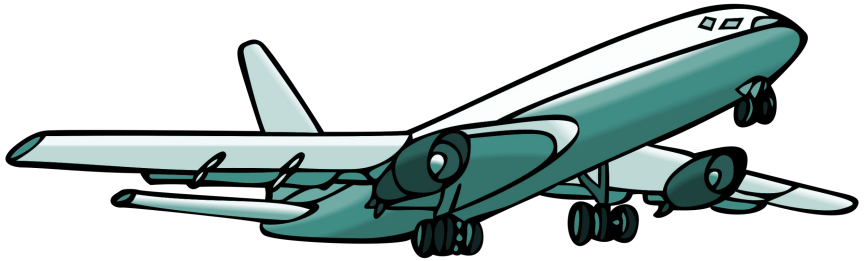
Images sourced from Google

Motivation



- Airlines are a multibillion dollar industry; any optimization is a significant profit
- Visualize data to predict delays so:
  - Airports can compare their flight traffic and subsequent delays
  - Airlines can better allocate resources based on which airports they depart from or arrive to
  - Customers can make informed decisions from reducing probability of a delay to reducing the number of people they come in contact with by choosing an airport with less flights depending on the day of the week

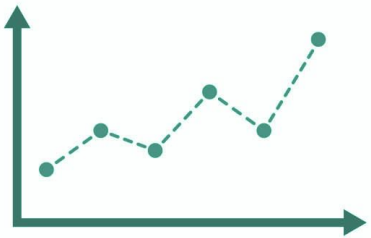
Images sourced from Google

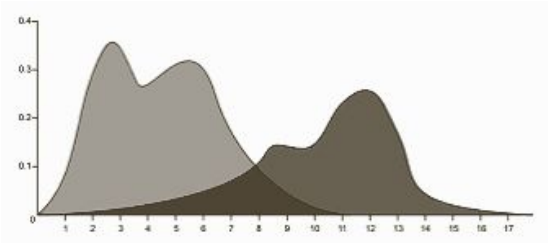
Methods and Plots

Leaflet Map - measures the proportion of delays based on origin/destination airport

Density Plot - compare distribution of flight delays based on the airline, flight length, and day of the week

Line Plot - defines the most popular days of the week for flights based on selected airport





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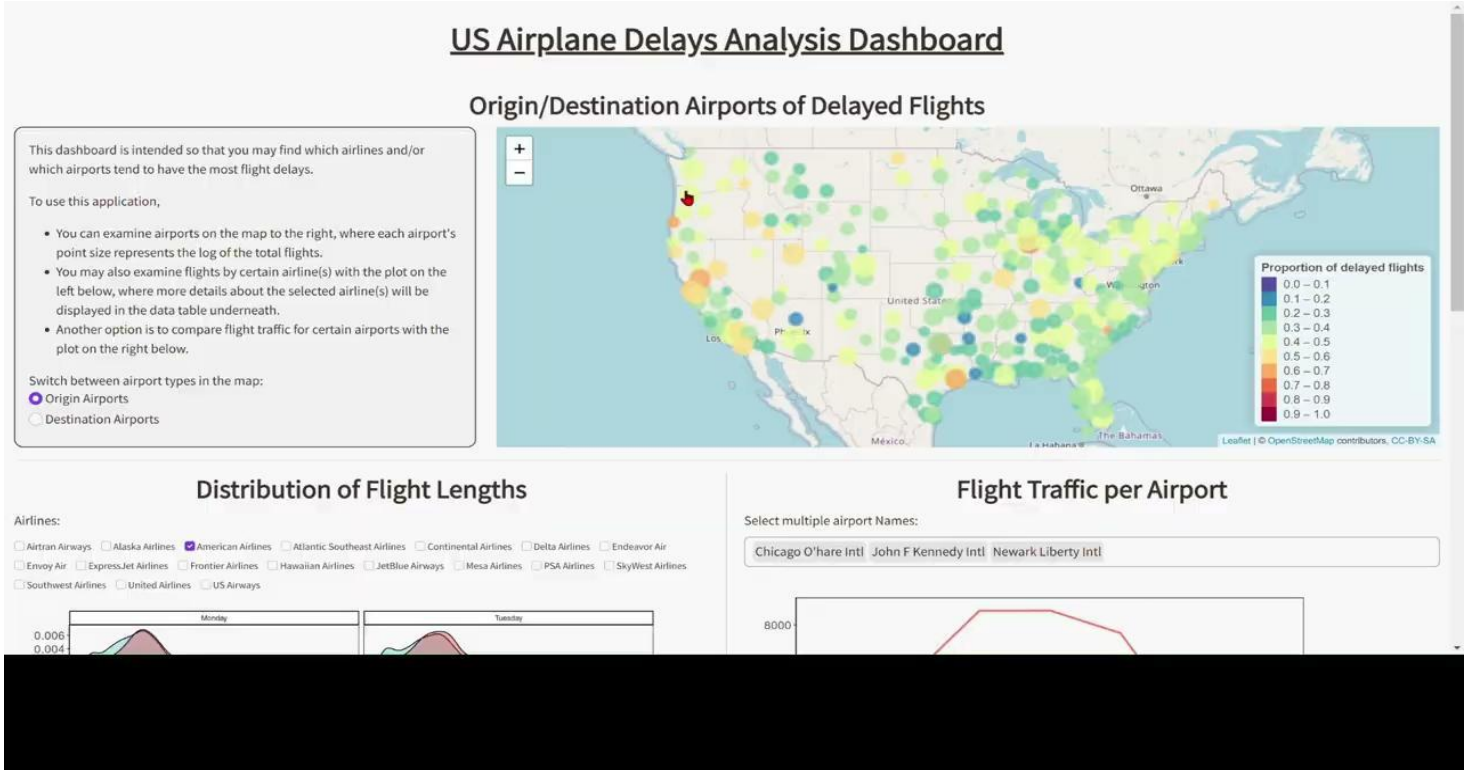
Visualization # 1: Airports of Delayed Flights



Visualization #2: Flight Lengths and Delays by Airline

Visualization #3: Flight Traffic Per Airport

Observations and Takeaways

- There are many delays when it comes to destination airports compared to origin – possible solution is to update air traffic control to increase landing efficiency.

- In general, airlines with shorter flights have lower rates of delays

- Most airports experience larger numbers of flights on Wednesdays and Thursdays with a second smaller peak between Sunday and Monday

Link to Application: here

Link to code on GitHub: here